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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DICUS, TAMRA

ART UNIT

PAPER NUMBER

1774

DATE MAILED: 06/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/826,236

Applicant(s)

HUFFER ET AL.

Examiner

Tamra L. Dicus

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22, 26 and 27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

The Examiner acknowledges the IDS, Paper No. 7.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-18, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN Peiffer et al. in view of USPN 4,177,310 to Steeves et al., USPN 6,045,654 to Kjelgaard, and USPN 6,228,486 to Kittel et al.

Peiffer teaches a matte transfer metallization film for chewing gum in this order: a film (a polymer layer- claim 13), a metal foil (also inorganic layer-claim 13), a polymer/adhesive layer, a paper support (regarding claims 13 and 17), refer to col. 1, lines 20-40 and col. 14, lines 15-22. Peiffer teaches depositing a metal layer of aluminum (col. 14, lines 30-33) via various deposition processes at col. 14, lines 39-45 onto a polymer film of polyethylene and/or polypropylene (addressing claims 4 and 14) at col. 4, lines 1-50. Peiffer is silent to providing the electron cured beam cured layer over a paper layer.

Steeves teaches a packaging multi-layer laminate comprising in order:

- A paper layer,
- An electron beam cured layer

at column 2, lines 38-47.

Steeves teaches an electron beam cured layer on the other side of the paper, stating it is known to cure oligomers and monomers such as epoxy and acrylic (epoxy acrylate- claims 5 and

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6) resins at col. 4, lines 1-4, with an high electron beam on a paper substrate for the purpose of providing a smooth and uninterrupted resin film surface at col. 3, lines 26-29 and col. 3, lines 59-col. 4, lines 20.

Hence it would have been obvious to one of ordinary skill in the art to modify the film of Peiffer to add an electron beam cured layer over a paper for the purpose of providing an economical substrate having smooth and impervious surface as taught by Steeves at col. 2, lines 40-48 and col. 3, lines 26-29 and col. 3, lines 59-col. 4, lines 20.

Peiffer is silent to adding the specific monomers, oligomers, and polymers of claims 5-7 and 21, nor slip agents of 12 and 22. Kittel teaches a thermal transfer laminate. At col. 10, lines 30-65, Kittel teaches it is known to cure a resin layer of oligomers, such as acrylates such as epoxy resins (epoxy acrylate) by an electron beam (electron beam cured layer) on a paper substrate. Hence it would have been obvious to one of ordinary skill in the art to modify the film of Peiffer to provide aforementioned monomer/oligomers/polymers since Kittel teaches it is know to cure such suitable resins as cited above. Kittel teaches adding slip agents is conventional at col. 10, line 24, hence it would have been obvious to one of ordinary skill in the art to modify the film of Peiffer to provide slip agents since Kittel teaches it is conventional in a cured resin composition as cited above.

Further addressing new claims 26 and 27, at col. 4, lines 30-50, Steeves teaches gas is passed over the coated cured layer to limit oxygen contamination. The Examiner takes the position that this layer is a gas barrier layer. Hence, it would have been obvious to one of ordinary skill in the art to modify the film of Peiffer to include a gas barrier layer to limit oxygen contamination as taught by Steeves at col. 4, lines 20-45 .

Although Steeves teaches curing an electron beam curable layer with beams of 2-3 Megarads (meeting claims 10-11) at col. 4, line 37, Steeves does not expressly disclose using an electron beam having the energy requirements of claims 8 and 9. Further regarding claims 8-11, the phrases, "cured by..." are process limitations and are given no patentable weight. The process does not change the product. See MPEP 2113. Furthermore, the invention defined by a product-by-process invention is a product NOT a process. *In re Bridgeford*, 357 F. 2d 679.

3. Regarding claim 2 and 20, Peiffer does not specifically express a wax layer disposed on a curable beam layer opposite the paper. Kittel suggests that a wax layer coated over an electron beam cured layer is known in the art at col. 10, lines 24. Kittel teaches wax is conventional to add to a laminate and UV curable resin, which renders a wax layer on top of an electron beam cured layer opposite a paper layer obvious to one of ordinary skill in the art when included with the invention of Peiffer.

4. Regarding claims 13, 15-18 while Peiffer does not expressly state a polymer layer of polyethylene terephthalate adjacent to an inorganic layer. Kjeldgaard states a packaging laminate comprising a paper substrate having a barrier layer that is of an inorganic material such as aluminium foil, aluminium oxide, and silica (silicon oxide, same material Applicant discloses as a barrier to oxygen and moisture) further comprising polypropylene or polyethylene terephthalate produced by metallizing the polymer layer at col. 3, lines 16-30. Further regarding claim 16, Steeves teaches it is well known in the art to metallize a polymer layer to produce an inorganic layer at col. 3, lines 59-60, lines 67-68, and at col. 4, lines 1-4 Steeves lists suitable polymers and inorganic layers such as aluminium. However, the act of *metallizing* is a process limitation and is given no patentable weight. Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. Patentability of an

article depends on the article itself and not the method used to produce it (see MPEP 2113).

Kjelgaard and Steeve are analogous art because both references are in the same field of endeavor and address the same or similar problem with which the inventor was involved, such as packaging laminates. Therefore, it would have been obvious to one of ordinary skill in the art to modify the laminate of Peiffer to substitute a polymer layer of polyethylene with a polymer layer of polypropylene or polyethylene terephthalate adjacent to an inorganic layer of an oxide comprising aluminium and silicon or aluminium foil, since Kjelgaard proves resin compatibility as cited above.

5. Claims 3 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN Peiffer et al. above, in view of USPN 4,177,310 to Steeves et al., USPN 6,045,654 to Kjelgaard, USPN 5,783,266 to Gehrke, and USPN 6,228,486 to Kittel et al.

Peiffer essentially teaches the claimed invention. Regarding claims 3 and 19, Peiffer is silent to teaching an ink layer printed on a paper layer adjacent to an electron beam cured layer. Gehrke teaches ink coated on a substrate such as paper with subsequent curing of a cured resin layer at col. 4, lines 55-60 and col. 7, lines 42-50, which would render an ink layer printed on paper, sandwiched between a paper and electron beam cured layer obvious to one of ordinary skill in the art.

Claim Rejections - 35 USC § 102/103

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 26-27 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over USPN 6, 010,757 to Yamamoto et al.
8. Yamamoto teaches a surface coating composition comprising a base layer of plastic film of polyethylene, polypropylene, PET, paper, aluminum, at col. 11, lines 44-65. Over the base, a curable coating via corona discharge (an electron beam cured coating) of resins such as polyethylene, polypropylene, PET at col. 12, lines 50-61. An additional coating of metals or metals oxides may be further formed over the resinous coating to provide a gas barrier at col. 12, lines 35-45. Lamination of gas barrier layers and films may be attached to paper, adhesive or wax may be used between the paper and gas barrier, at col. 13, lines 1-5, and 25-33. Yamamoto does not define the invention as a "gum package" *per se*, however, Yamamoto teaches the composite is used to wrap food (gum is inclusive, and hence is a functional equivalent), see col. 13, lines 35-50.
9. While Yamamoto teaches the resinous coating may further comprise additives such as wax at col. 13, line 4, Yamamoto does not define wax as a slip agent *per se*. However, wax is a functional equivalent to a slip agent.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

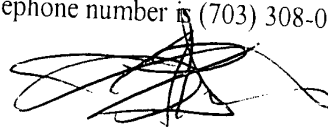
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- USPN 5,017,429 to Akao et al. teaches a packaging laminate. Akao teaches the laminate in this order: a metal foil laminated via adhesive (a bonding layer) on polyolefins such as a low density polyethylene resin (a polymer layer) to aid in light-shielding, laminated to paper. Akao teaches this metallizing polymers provide a gas barrier for printing.
- USPN 6,010,724 to Boyd et al. teaches packaged chewing gum and methods for packaging chewing gum.
- USPN 5,510,124 to Kopecky et al. teaches a method for packaging single units of chewing gum.
- USPN 6,337,113 to Muggli et al. teaches a packaging container composite laminated with polyolefin films and metallizing them.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is (703) 305-3809. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (703) 308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-8329 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Tamra L. Dicus
Examiner
Art Unit 1774

June 2, 2003

